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Aerospace Medicine

RESPIRATORY PROTECTION PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements the respiratory protection requirements of Air Force Occupational Safety Health (AFOSH) Standard (STD) 48-137, *Respiratory Protection Program*, and 29 Code of Federal Regulations (CFR) 1910.134, *Respiratory Protection*. It establishes policies, practices, and procedures for commanders and supervisor to use for the protection of the Department of the Air Force military and civilian workers from occupational respiratory hazards. **Attachment 1** is a Sample OI. This instruction applies to all units and organizations where respirator protection is essential to the safety and health of personnel.

SUMMARY OF REVISIONS:

The revision of this publication is to meet the format standards required by the Air Force. No content material has changed. Some required format changes has been made to allow for the conversion process.

1. Responsibilities:

1.1. Unit commanders will:

- 1.1.1. Enforce the provisions of this instruction within their respective organizations.
- 1.1.2. Appoint Respiratory Protection Program (RPP) monitor at each workplace where respirators are used (including emergency egress respirators).

1.2. Supervisors will:

- 1.2.1. Manage the respirator protection program in their respective work sites.
- 1.2.2. Ensure workers receive fit-testing and training.
- 1.2.3. Develop a respirator protection program operating instruction (OI).
- 1.2.4. Direct workers to the Optometry Clinic if corrective lenses are needed.
- 1.2.5. Attend annual refresher training.

1.2.6. Conduct recertification fit-testing of workers.

1.3. Bioenvironmental Engineering Services (30 AMDS/SGPB) will manage the RPP.

1.3.1. Public Health (30 AMDS/SGPM) will identify and initiate scheduling of workers who require a RPP occupational examination.

1.3.2. The Optometry Clinic (30 AMDS/SGPFE) will mount the corrective lenses.

1.4. The Fire Chief (30 CES/CEF) will:

1.4.1. Develop and conduct a RPP for all firefighters.

1.4.2. Ensure respirator wearers have been medically cleared for fit-testing.

1.4.3. Ensure all firefighters are fully trained on the use and limitations of self-contained breathing apparatus (SCBA).

1.5. Contractors will develop and conduct a respiratory protection program for all wearers of equipment which meets the requirements of AFOSH STD 48-137, *Respiratory Protection Program*.

2. Respiratory Protection Policy: No employee may wear a respirator unless required or recommended after a BES Survey. (NOTE: Filtering facepiece devices are not considered respirators). Workers wearing these devices will receive initial and annual training, by supervisors, as outlined in A 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*.

2.1. Respirator Certification: Respirators used under this program will be certified by the National Institute for Occupational Safety and Health (NIOSH). NIOSH certification numbers are prefixed with the letters TC.

2.2. Respirator Use : Normally, the need to wear a respirator will be validated by the results of air sampling conducted in the workplaces. However, respirator policies specified in technical orders, instructions, or higher headquarters policy letters will take precedence over air sampling results. In work situations where timely air sampling is not feasible, BES may recommend respiratory protection based on observation of the work process and professional judgment/experience.

2.3. Elective Use of Respirators : No elective use respirators will be worn by Air Force employees in Air Force workplaces. Respirators will be either required according to applicable directives or recommended (after evaluation) by the BES.

2.4. Filtering Facepiece Devices . These devices are not considered to be respirators and may be used, at employee discretion, strictly for comfort purposes. Supervisors shall train workers on the limitations of the filtering face piece device.

2.5. Emergency Use Respirators : Respirators used only for emergency escape do not require fit-testing; however, workplace supervisors will ensure personnel (including visitors) are trained in the use of the emergency escape device and inspections are accomplished.

3. Respiratory Protection Program:

3.1. The Bioenvironmental Engineering Services (BES), 30th Aerospace Medicine Squadron (30 AMDS/SGPB), Building 13848, 338 South Dakota, Vandenberg AFB 93437-6317, will:

3.1.1. Serve as office of primary responsibility (OPR) and technical consultant for the Vandenberg AFB respiratory protection program.

3.1.2. Identify potentially hazardous exposure conditions, evaluate the conditions under which respirators must be worn, and specify the types of respiratory protection required for the work process.

3.1.3. Evaluate organizational respiratory protection procedures, practices, and OI (see **Paragraph 3.7.1.**) and recommend corrective actions when deficiencies are noted.

3.1.4. Monitor and control respirator issue from supply as deemed necessary to ensure the appropriate respirators are available to the workplace.

3.1.5. Enroll and monitor all workers in the RPP who wear a required respirator to perform their duties.

3.1.6. Conduct recertification fit testing of workers who wear negative pressure respirators when working with Asbestos and Benzene (29 CFR 1910.1028), Lead (29 CFR 1910.1025), or other toxic substances at the schedule specified by Air Force or Occupational Safety and Health Administration instructions. Recertification fit testing will also be performed for workers if the supervisor determines the worker has insufficient knowledge of respirator use or the respirator appears not to fit properly (see **Paragraph 3.7.3.**).

3.1.7. Document all fit-testing on AF Form 2772, **Certificate of Respirator Fit Test**.

3.1.8. Provide initial training of supervisors who have the responsibilities of overseeing work activities of one or more persons who must wear respirators. Training will be repeated when a supervisor has a permanent change of station or becomes the supervisor of a different workplace.

3.1.9. Provide assistance as required in the procurement of respirators and respirator parts.

3.2. Physical Examination Section (30 AMDS/SGPE) will:

3.2.1. Perform medical evaluations to determine if workers are physically able to perform duties while using a respirator.

3.2.2. Review the medical history of the worker to identify previous medical conditions which could preclude respirator use.

3.2.3. Monitor and administer the medical surveillance of workers enrolled in the RPP.

3.3. Public Health (30 AMDS/SGPM) will identify and initiate scheduling of workers who require a RPP occupational examination.

3.4. Optometry Clinic (30 AMDS/SGPFE) will mount the corrective lenses from the system or kit inside the full facepieces. Temple bars or bands that extend beyond the edge of the respirator are not permitted.

3.5. The Fire Chief (30 CES/CEF) will:

3.5.1. Develop and conduct a respiratory protection program, for all firefighters, which meets the requirements of AFOSH STD 48-137.

3.5.2. Ensure that potential respirator wearers have been medically cleared for fit-testing before they are fit-tested.

3.5.3. Quantitatively or qualitatively fit-test all tight-fitting, positive pressure, respirators in a negative pressure mode.

3.5.4. Ensure all firefighters are fully trained on the use and limitations of self-contained breathing apparatus (SCBA) and will maintain complete documentation of initial and recurring training. The Chief, Bioenvironmental Engineering Services will review the program documentation at least annually to ensure that all AFOSH requirements are being met.

3.6. Unit Commanders will send copy of memorandum of appointment to 30 AMDS/SGPB.

3.7. Supervisors of workplaces where respirators are required will:

3.7.1. Maintain a BES-approved, respiratory protection OI. The content of the OI will include the items listed in the suggested Respiratory Protection Program Section Operating Instructions ([Attachment 1](#)) and addresses the use, maintenance, inspection, and care of respirators.

3.7.2. Request BES evaluation of proposed changes to work processes and obtain approval prior to implementation for use of any respiratory protection.

3.7.3. Direct workers assigned to jobs requiring respiratory protection to contact BES for fit-testing and training annually. Additional training may be requested if the supervisor determines the worker has insufficient knowledge of respirator use.

3.7.4. Ensure that each worker assigned to a job where a respirator is required is trained, fit tested, and given the proper respirator before they begin work.

3.7.5. Direct workers to the Optometry Clinic if corrective lenses are needed while wearing a full-face respirator. Provide the worker with the necessary system or kit for mounting the corrective lenses into the BES approved respirator. The system or kit are unique to each manufacturer's equipment and must be ordered along with the worker's respirator from supply.

3.7.6. Enforce the proper use of personal respirator equipment wherever a requirement for this equipment has been specified by BES.

3.7.7. Ensure that individually issued respirators are indelibly marked with the worker's name or unique identification code, (e.g., last four of their social security number).

3.7.8. Attend annual refresher training provided by BES.

3.7.9. Document initial and annual respiratory protection training on respirator wearer's AF Form 55, Employee Safety and Health Record.

3.7.10. Ensure compressed breathing air meets the requirements of Technical Order (T.O.) 42B-1-22, Table 2-1 where applicable.

3.7.11. Maintain AF Form 2772, **Certificate of Respirator Fit Test**, for each worker.

3.8. Contractors will comply with applicable local, state and federal requirements.

DONALD T DAVIES, Colonel, USAF, MSC
Commander, 30th Medical Group

Attachment 1

**RESPIRATORY PROTECTION PROGRAM SECTION
OPERATING INSTRUCTION (SAMPLE).****BY ORDER OF THE COMMANDER****30 XXX OPERATING INSTRUCTION 48-XXX****Date****RESPIRATORY PROTECTION PROGRAM**

OPR: 30 XXX/XX (MSgt John Doe)**Pages: 3**

This operating instruction establishes procedures for conducting an effective Respiratory Protection Program. References: AFOSH STD 48-137, 30 SWI 48-103, ANSI STD Z88.2-1980.

Specific questions concerning the RPP should be directed to 30th Aerospace Medicine Squadron Bioenvironmental Engineering Services (BES) at extension 6-7811.

1. GENERAL: Respiratory protection is required in this work area because certain operations may generate airborne contaminant levels above occupational exposure limits (OEL). In particular, the listed respirators and cartridges must be worn when performing the listed operations:

Hazardous Operation	Respirator	Cartridge
Operation #1	Respirator #1	Type of Cartridge
Operation #2	Respirator #2	Type of Cartridge

2. RESPIRATOR USER TRAINING: BES will provide initial supervisory and worker training concerning the RPP and respirator use.

2.1. Refresher training will also be conducted by BES, annually as a minimum. Topics to be covered during this training are as follows:

- 2.1.1. The respiratory hazard and what happens if the respirator is not used properly.
- 2.1.2. The engineering and administrative controls being used and the need for respirators to provide protection.
- 2.1.3. The reason for selecting the particular respirator used in this shop.
- 2.1.4. The function, capabilities, and limitations of the selected respirator.
- 2.1.5. The method of donning the respirator and checking its fit and operation.
- 2.1.6. The proper wear of the respirator.
- 2.1.7. Respirator Maintenance
- 2.1.8. Recognizing and handling emergency situations

2.2. This training will be documented by the shop supervisor on the worker's AF Form 55.

3. RESPIRATOR ISSUE: Respirator issue documents will be coordinated through BES to ensure that the correct respirator is being ordered. Respirators are nationally stock listed in the 4240 stock class. Respirators issued to personnel in the shop will be maintained by the person to whom they were issued.

4. PRE- AND POST-USE RESPIRATOR INSPECTION: Respirators will be inspected before and after each use. Problems with respirators will be brought to the attention of the supervisor for correction. Ensure that items specific to the respirator which are covered in the manufacturer's literature are also inspected.

5. ROUTINE/NON-ROUTINE RESPIRATOR USE MONITORING:

5.1. Positive/Negative Pressure Checks: Each time a respirator is donned for use during one of the operations listed in paragraph 1., a positive and negative pressure check will be performed.

5.1.1. Positive Pressure Test: Close off the exhalation valve and exhale gently onto the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

5.1.2. Negative Pressure Test: Close off the inlet opening of the cartridges by covering with the palm of the hands or by replacing the seals, inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

5.2. Cartridge Replacement: Cartridges will be replaced as often as necessary to protect the worker. This includes replacement when the wearer detects an odor or smells the chemicals being used or when their ability to trap contaminants has been visibly compromised (when breathing becomes harder than usual). Prefilters will be changed each work shift as a minimum, or as required during a work shift. Cartridges will be used only up until their shelf life runs out.

5.3. Maintenance: Respirator maintenance will be carried out quarterly, or more often as necessary to maintain the integrity of the respirator. Each wearer shall be provided with a respirator that is clean and in good operating condition. Maintenance shall include:

5.3.1. Washing, sanitizing, rinsing and drying.

5.3.2. Inspection for defects.

5.3.3. Replacement of worn or deteriorated parts and repair, if necessary. Repairs can only be made with parts designed for that respirator. Interchanging parts between types or manufacturers voids approval of the respirator. No attempts will be made to replace components or to make adjustments or repairs beyond the manufacturer's recommendations. Reducing or admission valves and regulators will be returned to the manufacturer or other trained technician for adjustment and/or repair.

5.3.4. Written records of maintenance actions taken will be kept.

5.4. Storage: Respirators shall be stored to protect against dust, sunlight, excessive heat, extreme cold, excessive moisture, damaging chemicals, and physical damage. The storage area must be a convenient, clean, and sanitary location. Respirators will not be stored in lockers or tool boxes, or under vehicle seats

unless it is in a sealable (zip seal) plastic bag in a crushproof carrying case or carton. Respirators will not be hung by their straps for storage. If the respirator cannot be stored in the manufacturer's original plastic bag and box it shall be stored in a sealable (zip seal) plastic bag in a single layer. The storage position will be in such a way that the facepiece and exhalation valve rest in a normal position and the function of the respirator will not be impaired by the elastomeric parts taking a set in an abnormal position.

5.5. Exit Hazardous Area. A respirator wearer will be permitted to leave the hazardous area for any respirator-related cause. Reasons which may cause a respirator wearer to leave a hazardous area include, but are not limited to:

- 5.5.1. Failure of the respirator to provide adequate protection.
- 5.5.2. Malfunction of the respirator.
- 5.5.3. Detection of the leakage of air contaminant into the respirator.
- 5.5.4. Increase in resistance of respirator to breathing.
- 5.5.5. Severe discomfort in wearing the respirator.
- 5.5.6. Illness of respirator wearer, including: Sensation of dizziness, nausea, weakness, breathing difficulty, coughing, sneezing, vomiting, fever and chills.

6. RESPIRATORY HAZARD MONITORING: The supervisor will ensure the hazard necessitating the use of respirators is evaluated by BES at least annually.

7. RESPIRATOR USE IN EMERGENCY AND RESCUE OPERATIONS: (This section is only needed for shops who are using respirators for emergency and/or rescue operations. List each hazard for which emergency respirators are needed, and list the location where the respirators will be maintained. Emergency/escape respirators must be inspected after each use, and monthly otherwise.)

Signature